George's PINK PAGES June 1999

FINISHING OUT SUPERS

This is Memorial Day weekend and we are rapidly nearing the end of our spring nectar flow. Your super frames will be in various conditions: many TOTALLY capped, some maybe 90% capped, others partially capped, and others empty. It is a mistake just to remove all the supers now, and also a mistake just to wait another week or month. The best program, of course, is more work; and that is remove ONLY the totally capped frames thereby reducing the number of supers left on the colony which, of course, crowds the bees into less space. Since the swarming season is long past and the nectar flow greatly diminished, there is little fear of swarming. Depending on how many supers you had on a colony, your ultimate aim is to have the almost capped frames close to the queen excluder, the partially filled frames above those, and the empty frames stored away until next year. This arrangement forces the bees to cap the ripened honey, move widely spread honey to a centralized location and cap it, store the meager remaining incoming nectar in the brood chamber area for early winter preparation. Most of the "almost totally capped" frames and even some of the partially filled frames will be totally capped, and hence ready for harvesting in about two weeks or so. This format arrangement provides you with two different extraction options:1) Extract the totally capped frames the same day as you remove them; and make a second extraction of the other frames after they are totally capped 2 to 4 weeks later; or 2)safely store the first harvest of totally capped frames for 2-4 weeks and merge them with the later removed frames to make just one extraction for the season.

WHY TOTALLY CAPPED FRAMES ONLY? Honey with a moisture content over about 19% might ferment, and depending on our weather, totally capped honey has a water content of about 16% to 18.5% before you uncap it for extraction. When you consider our normal high humidity in Central Maryland and the fact that honey is HYGROSCOPIC (it absorbs moitsure out of the air), the moisture content of our Maryland honey is normally increased in the time period between extraction and bottling. UNcapped honey has a high moisture content and is not yet ripened, and hence including that uncapped honey with fully ripened capped honey may well raise the moisture content causing fermentation of the total batch.

Back in the "good old days", honey was not harvested until the coolness of September because the beekeeper "hoped" he might get a bigger crop if he left the supers on after June; not to mention the fact that in those "good old days" there was lots of alfalfa and summer clover planted as cattle feed on the many dairy farms in Central Maryland which are now occupied by cities, industries, and schools. TIMES CHANGE, including the acquisition of MITES, viruses, understanding pheromones, and public fear of bees.

HARVESTING HONEY

Even in 1999 and considering all those UNINFORMED American neighbors plus the hard work, some beekeepers still use a BEE BRUSH as a principle harvesting tool. The

use of a bee brush makes bees MAD and excites them to sting. The bee brush falls in that category of "things of the past" like auto tire innertubes, typewriters, wood cooking stoves, fountain pen ink, and a drugstore soda fountain. Some beginners even have and think they can use a Porter Bee Escape in that inner cover hole not knowing that success depends on chilly nights to make the bees leave the supers to cluster with the queen.

In our "changing times", harvesting honey is done by removing the bees away from honey by use of an expensive "bee blower" (like a powerful leaf blower) or making them retreat from the smell of certain chemicals, namely Bee-Go or Honey Robber, or my hard-to-find favorite, benzaldehyde. Bee-Go is primarily Butyric Anhydride which has a "stink" that defies further explanation (far worse than a skunk odor), and Honey Robber is the same chemical, but the odor is reduced by the addition of an odor of cherries. Benzaldehyde, available only from Mann Lake Bee Supply, is the wonderful odor of oil of almonds. You can either buy a FUME BOARD or make one by cutting a piece of 1/2" plywood the size of an inner cover and stapling on a cover of an old burlap sack, a piece of felt, or even old winter cotton pajamas or underwear. Sprinkle whichever chemical you chose over several places on the cloth (no more than 2 tablespoons of chemical), remove the hive top and inner cover and place this Fume Board down on the top super and leave in place for about 5-6 minutes, remove the top super and place your Fume Board on the next super, etc. Tightly cover those removed supers with NO BEES INSIDE and take them to some bee-free area. Any of these chemicals cost about $15-20 per quart, but, properly used, a couple of tablespoons is enough to remove perhaps 10-20 supers of honey depending on how warm it is and how long you leave it on.

The easiest, fastest, and most expensive harvesting tool is the bee blower. You simply remove a super prop it up near the front of the colony and BLOW the bees out of the super onto the grass where they can easily walk back into the colony. The bees do NOT object and hence do not sting or get excited, but the bee blower requires electricity and costs about $200+ (gasoline powered are heavy and more expensive).

Actually, I use both, benzaldehyde fume board and "finish off" with my bee blower to harvest honey. It is very rapid and I don't have any mad bees that get excited to sting that using a bee brush would cause.

EXTRACTING, FILTRATION, SETTLING to JARRING

Let me start off with a point of discussion, but there should be NO argument when you finish reading the next few lines. Today, due a lack of knowledge, there are some people that won't buy honey if it has been "heated", justifying their position by stating that "heated" honey is "NOT natural". Surely, they are correct if the beekeeper has processed his honey at temperatures of150-180 degrees. However, honey temperatures often go to 100-110 degrees in nature. I suggest that you prove this to yourslf by measuring the temperature inside a honey super at the top of a colony under a brilliant sun on a summer day when the weather bureau is reporting an official temperature reading of 95-98 degrees in your area. Your bees are working like tigers gathering water, spreading it around on frame tops, and furiously fanning their wings at the entrances to cool the

colony. By contrast, a queen bee will not lay eggs at a temperature of less than 91 degrees and prefers a temperature closer to 94-96 degrees; but I doubt that these "naturalists" know that, or even care maybe because of their anthropomorphic thinking.

It does not require rocket scientist thinking to thoroughly understand that extraction of honey when its temperature is 90-100 degrees to very easy, fast, and thorough; whereas extraction of honey which is at a room temperature of perhaps 75 degrees is difficult, slow, and not very thorough. Hence, always extract your honey when it is at hive temperature of 90 degrees or above. This is easy to do by carefully sealing the supers so that they are safe from any bee entering and then set these supers in full sun for at least a day and extract after dark. Uncapping proceeds rapidly because the wax cuts easily, the frames to not have to spun as fast or as long, and the frames are left with very little honey clinging to the wax.

The temperature of the honey is even more important when it is being FILTERED, which means the removal of essentially ALL solids, even almost microscopic pollen and surely crystals; or when it is being STRAINED, which means the removal of big things, "nuts and bolts" like bee legs, bee wings, pieces of wax, slivers of wood frame and any other visible solid. There are advantages and disadvantages to both filtering and straining. Filtering is normally done by the commercial honey producer to retard honey crystallization which gives the honey longer shelf life; but it also removes the pollen that some buyer might want to alleviate his allergy to local flora. By contrast, straining is the procedure used by most hobbyist beekeepers to remove the visible solids but straining leaves the microscopic pollen particles that not only might help someone's allergy, but also cause faster crystallization of most honeys. However, again, the temperature to which I refer is a temperature no higher than that which might be found in a honey super under a scorching sun on a hot day or maybe 110 degrees. Honey at room temperature filters not much faster than warm axle grease, whereas honey warmed to 100 degrees filters like water running through mosquito netting.

As my honey leaves the extractor, it goes through one course mesh screen followed by a fine mesh screen to remove all the visible solids, (the "nuts and bolts"). There are many different filtering or straining materials in use by many, and cheesecloth is an old stable; but I despise using cheesecloth because it leaves lint in the honey. I prefer using a man-made material like nylon because of its strength, the ease of cleaning, and it does not leave any lint. Nylon material can be purchased in all grades of various meshes, so that you can get extremely fine filtration when using a woman's slip material or 140 dineer sheer nylon pantyhose or stocking. Of course this fine filtering is slow even with 90 degree honey. This is how I prepare "show" honey. For routine honey filtration I use a nylon bridal veil fine net material called "marquisette" and filter my warm honey through about 3 folded layers of that, and the honey runs through at a workable speed. How do I heat this honey? After the honey comes out of my extractor through two different mesh screens, I put this honey in 60 pound 5 gallon buckets, put a top on them, set them out in the hot sun for at least a day (preferably two), skim the froth off the top with a "skimmer paddle", and filter them through the nylon after dinner while the honey is still quite warm.

This honey is transferred to a 300 pound bottling tank, covered to keep moist air out, and allowed to sit and settle for at least 3 days before it is skimmed of froth again. At that point, it is ready to be bottled, and then put in my three 24 cubic feet freezers until sale time.

CLEANING, DRYING, & STORING DRAWN COMB FRAMES

All have heard me say that "drawn comb is a beekeeper's most valuable possession", and now I will explain how to do it.

After you extract, clean the propolis and burr comb off the super boxes and load them with your "wet" extracted frames. Pick out one of your strongest colonies, remove the telescoping cover, but leave the inner cover in place, add a totally EMPTY box, and then place several of your wet supers on top of this followed by a telescoping cover. At the end of a week or less, the colony bees should have gone through the inner cover center hole and thoroughly cleaned out all the wax cells and wooden frames of any honey and taken it into their colony below. Take these supers of clean dry frames into their winter storage location, and stack them 10 super bodies high putting a teaspoon of PDP, para-dichloro-benzene, on a piece of paper on top of the frames of EACH super with 2 tablespoons of PDP on the top of the tallest super, seal a cover on and seal the cracks between supers with sticky tape. These will have to be checked each month until cold weather and additional PDP added if needed. If all of this is properly done, when you need supers next April, they will be right there with no mice damage, no wax moth damage, dry and clean, just ready for next season's honey. The smell of PDP will be gone by setting the supers outside individually to air out for 24-48 hours before installation on a colony.

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